

DEPARTMENT OF THE INTERIOR - AVIATION MANAGEMENT
AIRCRAFT RENTAL AGREEMENT PROVISIONS: SUPPLEMENT NO. 16
SPECIAL USE - FIRE RECONNAISSANCE

Definitions

Fire Reconnaissance: Reconnaissance shall be conducted in aircraft flying at a distance greater than 500 feet from the terrain, patrolling in search of fire. Aircraft approved to perform missions under this Supplement are also approved for Supplement #5, "Resource Reconnaissance".

B8.16.1 GENERAL – Refer to Section B1

B8.16.2 OPERATIONS – Refer to Section B2

B8.16.3 PERSONNEL REQUIREMENTS

B8.16.3.1 Pilots shall be knowledgeable of all mission-related tasks, i.e., mountain flying techniques, circling over a point maneuvers, and have a basic understanding of fire behavior.

B8.16.3.2 Pilots shall be required to demonstrate proficiency during an agency evaluation flight. The proficiency check may not be required if the pilot has been previously carded for low level or air tactical operations.

B8.16.4 EQUIPMENT REQUIREMENTS

B8.16.4.1 Aircraft shall meet the basic requirements for airworthiness and conditions as listed in Aircraft Rental Agreement (B4).

NOTE: First aid and survival kit are not required for this Supplement.

B8.16.5 AVIONICS REQUIREMENTS

NOTE: Aircraft approved for Fire Reconnaissance meet all requirements for Resource Reconnaissance, and may also be used for Resource Reconnaissance missions.

B8.16.5.1 The following systems, as a minimum, shall be installed or available, in addition to the basic requirements listed in the Aircraft Rental Agreement (B5). NOTE: Effective January 1, 2005, aircraft to be approved under this Supplement must be equipped with an ELT meeting either TSO-C91a or TSO-C126, and a 760-channel VHF-AM transceiver covering 118.000 to 136.975 MHz.

B8.16.5.1.1 One Global Positioning System (GPS) receiver, which shall utilize the WGS-84 datum, and reference latitude and longitude coordinates in the DM (degrees/minutes/decimal minutes) mode for aircraft positioning. The GPS shall be securely mounted, utilize an approved, fixed, external (to the receiver) antenna, and be powered by the aircraft electrical system.

B8.16.5.1.2 Two weatherproof, external, broadband antennas each covering the 150-174 MHz band (Comant model CI-177 or equal), with associated RG-58A/U (or equivalent) coaxial cable terminated in a male BNC connector within the aircraft cabin in a location which facilitates connection to a unit mounted between the pilot and copilot seats, plus four feet (minimum).

B8.16.5.1.2.1 In lieu of B8.16.5.1.2 above, the following may be substituted:

B8.16.5.1.2.1.2 One VHF-FM multi-mode aeronautical transceiver (FM-1), which provides selection of both narrowband (12.5 kHz) and wideband (25.0 kHz) bandwidth operation on each channel. Operation shall remain in the narrowband mode unless otherwise directed by the Government manager.

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B8.16.5.1.2.1.3 The transceiver's operational frequency range shall include the band of 150 to 174 MHz. The operator shall be able to program any usable channels within that band while in flight.

B8.16.5.1.2.1.4 Carrier output power shall be a minimum of 5 watts . The transceiver shall be capable of displaying receiver and transmitter operating frequency, and shall provide both receiver and transmitter activation indicators for main and guard. Simultaneous monitoring of both main (150-174 MHz) and guard (168.625 MHz) receivers is required. Single bandwidth guard receivers which operate in the wideband (25.0 kHz) mode are acceptable. Scanning of the guard frequency is not acceptable. The transceiver's/encoder's operational controls must be located and arranged so that both the pilot and observer/copilot, when seated, have full and unrestricted movement of each control without interference from their clothing, the cockpit structure, or the flight controls.

B8.16.5.1.2.1.5 One CTCSS sub-audible tone encoder (which may be an integral part of the transceiver), with the lowest 32 TIA/EIA-603 standard tone frequencies (from 67.0 to 203.5 Hz, less 69.3 Hz) being selectable, shall be interfaced to the above transceiver. It is desired that the encoder provide a display of the selected tone or tone frequency.

B8.16.5.1.2.1.6 Each VHF-FM transceiver/encoder system shall be programmed with Guard transmit and receive frequencies of 168.625 MHz and a 110.9 Hz CTCSS transmit only tone. Guard shall be monitored by the pilot during all ordered flight.

B8.16.5.1.2.1.7 The following models of VHF-FM aeronautical transceivers are known to meet the above requirements:

Bendix-King/BK Radio model KFM-985 (newer models capable of both wideband & narrowband operation only)
Eureka Radio ERS-9600NB w/external tone encoder
NAT(Northern Airborne Technology) NPX-138N-050
NAT(Northern Airborne Technology) NPX-138N-070
NAT(Northern Airborne Technology) NTX-138-050
Technisonics TFM-138 (serial number 1540 and up)
Technisonics TFM-138B/C/D, TFM-500 (all)
Technisonics TDFM-136 (all)
Wulfsberg RT-5000/C-5000 with Guard option
Wulfsberg RT-9600N w/C-962A control head

B8.16.5.1.2.1.8 Any digital aeronautical, mobile, or portable VHF-FM radios furnished to meet the requirements of this document shall also be APCO Project 25 (EIA/TIA-102) compliant.

NOTE: All future aviation contracts solicited by DOI (which are required to be VHF-FM radio equipped) shall be furnished with at least one P25, Phase-I (digital-capable) aviation radio by January 1, 2010. In aircraft required to be furnished with more than one VHF-FM radio, all such radios must be P25, Phase-I compliant by the January 1, 2010 date.